

Before the
Federal Communications Commission
Washington, D.C. 20554

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In the Matter of)

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

FWCC Request for Declaratory Ruling on)
Partial-Band Licensing of Earth)
Stations in the Fixed-Satellite Service)
That Share Terrestrial Spectrum)

IB Docket No. 00-203
RM-9649

FWCC Petition for Rulemaking to Set)
Loading Standards for Earth Stations)
In the Fixed-Satellite Service that)
Share Terrestrial Spectrum)

Onsat Petition for Declaratory Order that)
Blanket Licensing Pursuant to Rule 25.115 (c))
Is Available for Very Small Aperture)
Terminal Satellite Network Operations at)
C-Band)

SAT-PDR-19990910-00091

Onsat Petition for Waiver of Rule 25.212 (d))
To the Extent Necessary to Permit Routine)
Licensing of 3.7 Meter Transmit and Receive)
Stations at C-Band)

Ex parte Letter Concerning Deployment of)
Geostationary Orbit FSS Earth Stations in the)
Shared Portion of the Ka-Band)

REPLY OF TELESAT CANADA

Telesat Canada ("Telesat" or "the Company") is pleased to provide the following reply to the comments filed in response to the Notice of Proposed Rulemaking ("the NPRM") released by the Commission on October 24, 2000, relating to the above captioned petitions. As Telesat indicated in its comments filed on January 8, 2001, the Company is particularly concerned with the Part 25 rule changes proposed by the Commission in response to the petition submitted by the Fixed Wireless Communications Coalition ("FWCC"). As explained by the Company in those comments, these proposed rule changes fail to fully take into account the inherent differences in

the provisioning of Fixed Satellite Services (“FSS”) vis-à-vis terrestrial Fixed Services (“FS”), and would have a detrimental impact on the whole satellite industry and its customers.

I. THE FWCC PROPOSALS

Telesat notes that the vast majority of parties who filed comments opposed the proposed rule changes relating to the FWCC petition. Moreover, these dissenting voices were not restricted to members of the satellite industry¹, but also included broadcast television and radio entities², a variety of industry associations³, as well as international earth station licensees⁴. Indeed, given the disparate industry backgrounds and affiliations of these parties, their near-unanimous agreement on the matter at hand provides a particularly compelling case that the proposed rules will not serve the public interest.

In this reply, it is not Telesat’s intention to simply repeat the specific arguments advanced by these parties in support of their position common with Telesat. Rather, the Company will instead highlight three arguments presented by many of these parties that Telesat believes are particularly insightful as to the severe shortcomings of the proposed rules.

1. The “demonstrated use” requirements would be an impractical and unreasonable constraint to place on satellite service providers.

Numerous parties stressed that the proposed “demonstrated use” rules, which requires earth station operators to demonstrate past, present or imminent use of particular frequencies to retain

¹ See, for example, Arrowhead Space & Telecommunications, Inc., Astrolink International LLC, Catalina Transmission Corp., GE American Communications, Inc., Hughes Network Systems, Hughes Communications, Inc. and Hughes Communications Galaxy, Inc. (“Hughes et al”), JFL Communications, Inc., Lockheed Martin Global Telecommunications, Inc., Loral Space & Communications Ltd., Megastar, Inc., PanAmSat Corp., Skybridge LLC, Teledesic LLC, TRW, Inc., and Virtual Geosatellite LLC.

² See, for example, Walt Disney Company, and Home Box Office and Turner Broadcasting System, Inc. (“HBO et al”).

³ See, for example, Satellite Industry Association, Satellite Broadcasting and Communications Association, World Teleport Association, and the Aerospace Industries Association of America (“SIA et al.”), National Cable Television Association (“NCTA”), and National Public Radio, Inc. (“NPR”).

⁴ See, for example, BT North America, Inc., and Sprint Communications Company.

access to those frequencies, would seriously diminish or constrain their ability to respond to changing circumstances or customer requirements and demands.⁵

As observed by Arrowhead, in order to provide service at an acceptable level, satellite service providers must have significant flexibility to manage their facilities efficiently and, when necessary, to shift services between transponders or possibly between satellites. Arrowhead notes that this need for flexibility is particularly acute in emergency situations or when there has been satellite equipment failures, but can arise at any time. Indeed, in addition to the loss of flexibility to respond in times of emergency or to restore service in the event of satellite equipment failure, SIA et al notes that the demonstrated use rules would deprive satellite service providers of the flexibility they require to respond to changing customer requirements; to make adjustments to facilitate coordination with adjacent satellites; to launch replacement or next generation satellites that take advantage of technical advances; and to manage overall network capacity efficiently.

Simply put, the demonstrated use requirement would essentially strip away most of the flexibility satellite service providers need in order to manage their facilities or respond to changing circumstances, including emergency situations. The industry and its whole customer base would be placed in a precarious position. Adoption of the demonstrated use requirement would be a short-sighted policy.

2. The proposed changes in interference coordination procedures are unnecessary and ignore critical factors that must be taken into account.

⁵ See, for example, Arrowhead at 1, Astrolink at 6, BT North America at 4, Catalina at 3, GE Americom at 14, HBO et al at 5, Hughes et al at 8, JFL Communications at 3, Lockheed Martin at 3, Loral at 7, Megastar at 2, NCTA at 3, NPR at 4, PanAmSat at 2, SIA et al at 23, Skybridge at 5, Sprint at 1, Teledesic at 2, Virtual Geosatellite at 9, and Walt Disney at 2.

The proposed new frequency coordination procedures, which essentially fix for all time the choice of coordination model and interference objectives at any given earth station, have also been challenged as being unnecessary and unreasonable by various parties.⁶

The fatal flaws identified with these proposed rules relate primarily to the fact that no leeway is allowed to consider or factor in changing conditions in subsequent coordinations at these given earth station locations. As pointed out by a number of these parties, the interference environment and technical factors involved in a coordination at a specific site can and often do change substantially over time, meaning that the interference model used at one point in time may no longer be valid at another time.

As was also pointed out by these parties, requiring earth station operators that accept a particular level of interference from one FS station licensee to accept that level of interference from all future coordinated FS stations ignores the fact that the interference effects are generally cumulative, and will thus inevitably give rise to situations where service quality would deteriorate to unacceptable levels, assuming the service could continue to be offered at all.

The proposed new interference procedures introduce a level of rigidity and finality which is totally at odds with the changing nature of the technical environment under which earth station operators must plan and operate their facilities. For valid coordination results to be produced and correct decisions reached, the model and procedures followed must be appropriate to, and be able to take account of prevailing circumstances. The proposed interference procedures set out in the NPRM fail to do this and should be rejected.

3. The Commission's current rules work well and reflect the unique operational and technical characteristics of satellite and terrestrial services.

A number of parties also pointed out that terrestrial and satellite service providers provide very different services using very different technologies, and that the Commission's current rules have

⁶ See, for example, Astrolink at 13, GE Americom at 21, Hughes et al at 11, Lockheed Martin at 6, Loral at 11, NCTA at 6, SIA et al at 41, and Skybridge at 2.

been designed and fine-tuned over time to take account of these differences to ensure efficient use and practical coordination of shared spectrum.⁷ The proposed new rules are a radical departure from the current rules, and as shown above will have significant adverse consequences for satellite service providers.

In contrast, as several of these parties noted the public record associated with the FWCC petition contains no evidence demonstrating that FS licensees have been disadvantaged when sharing bands under the current rules with FSS licensees. Indeed, in the present NPRM parties were expressly asked to identify situations where sharing problems have arisen, but virtually nothing was presented by any party even remotely suggesting that FS service providers are experiencing any problems in the coordination process under the current rules.

With no group able to conclusively demonstrate that sharing problems exist under the current rules, and others able to convincingly show that significant problems would be created if the rules were changed as proposed, there would appear to be no justification for making those changes. Accordingly those proposed rule changes should be rejected out of hand.

II. THE HUGHES PROPOSALS

Telesat notes that there was broad support for the Hughes proposals to facilitate the deployment of terminals in the shared 18 GHz spectrum amongst those parties who filed comment on these proposals.⁸ Telesat also agrees with the general direction being taken with those proposals. Indeed, in the 18.3 - 18.58 GHz band, the principle of not requiring a license for receiving terminals (which are not capable of causing interference) is a well established one which as part of the trend toward deregulation has led to a reduced administrative burden for both operators and regulators alike.

However, although present Commission rules provide the *earth terminal user with an option to voluntarily coordinate with terrestrial users and/or to voluntarily register the earth station antenna*

⁷ See, for example, Astrolink at 2, BT North America at 9, GE Americom at 5, Hughes et al at 5, Loral at 3, SIA et al at 9, TRW at 7, and Virtual Geosatellite at 6.

⁸ See, for example, GE Americom at 23, Hughes et al at 17, Lockheed Martin at 12, and SIA et al at 48.

for frequency protection, in a band where very small antenna earth terminals may be ubiquitously deployed, it may be unrealistic to expect to be able to protect a very small terminal without any limits on its minimum antenna size or its physical deployment (e.g., minimum elevation angle or minimum discrimination toward the horizon).

In the NPRM, the Commission sought comments on whether to limit the deployment of earth terminals in the shared portion of the Ka-band to a number of pre-coordinated GSO FSS earth stations or to specific satellites. Telesat is generally of the view that any such specific limitations would be too restrictive for many of the same reasons that SIA et al cited in their opposition to the FWCC proposed rule changes.

Accordingly, while Telesat supports the Hughes proposals in principle, the Company would urge the FCC to await the outcome of studies that provide a technical basis on limits (for example, on the minimum antenna size or elevation angle) upon which the earth station's receive band can be optionally registered for protection from terrestrial users. The outcome of studies in the ITU-R WP4-9S may provide such a technical basis. This would not prevent satellite operators from deploying earth stations in the band on an unprotected basis in the interim.

CONCLUSION

Telesat is in agreement with the arguments presented above for rejecting the proposed rule changes. In particular Telesat supports the view that the "demonstrated use" requirement would be an impractical and unreasonable burden to place on satellite service providers, and believes that there should be no changes to the rules concerning coordination between the earth stations in the FSS and terrestrial FS stations in shared spectrum. The Commission's current rules reflect the unique operational and technical characteristics of satellite and terrestrial services and appear to be very effective. In this regard, as the Company noted in its January 8th 2001 comments, FS and FSS operators have a long tradition of cooperation and compromise, allowing both sectors to effectively address the needs and requirements of their respective customers. Changing the rules under which this cooperative spirit has developed will upset this delicate balance and will have disastrous consequences for the satellite industry and its customers.

Telesat also supports the general thrust of the Hughes proposals but would suggest that the Commission wait until the results of further technical study are known before issuing a final ruling on those proposals.

All of which is respectfully submitted by Telesat Canada this 9th day of February, 2001.

A handwritten signature in black ink, appearing to read 'Paul D. Bush', with a large circular flourish at the beginning and a long horizontal stroke extending to the right.

**Paul D. Bush
Vice President, Corporate Development**